General

Guideline Title

Delirium. In: Evidence-based geriatric nursing protocols for best practice.

Bibliographic Source(s)

Tullmann DF, Mion LC, Fletcher K, Foreman MD. Delirium. In: Boltz M, Capezuti E, Fulmer T, Zwicker D, editor(s). Evidence-based geriatric nursing protocols for best practice. 4th ed. New York (NY): Springer Publishing Company; 2012. p. 186-99.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Tullmann DF, Mion LC, Fletcher K, Foreman MD. Delirium: prevention, early recognition, and treatment. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008 Jan. p. 111-25.

Recommendations

Major Recommendations

Levels of evidence (I–VI) are defined at the end of the "Major Recommendations" field.

Parameters of Assessment

Assess for Risk Factors (Michaud et al., 2007 [Level V])

- Baseline or pre-morbid cognitive impairment (see the National Guideline Clearinghouse [NGC] summary of the Hartford Institute for Geriatric Nursing guideline Assessing cognitive functioning)
- Medications review (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Reducing adverse drug events in older adults)
- Pain (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Pain management in older adults).
- Metabolic disturbances (hypoglycemia, hypercalcemia, hyponatremia, hypokalemia)
- Hypoperfusion/hypoxemia (blood pressure, capillary refill, pulse oxygen saturation [SpO_2])
- Dehydration (physical signs/symptoms, intake/output, sodium [Na^+], blood urea nitrogen/creatinine ratio [BUN/Cr])
- Infection (fever, white blood cells [WBCs] with differential, cultures)
- Environment (sensory overload or deprivation, restraints)
- Impaired mobility

- Sensory impairment (vision, hearing)

Features of Delirium (American Psychiatric Association, 2000 [Level I]; Inouye et al., 1990 [Level IV])

Assess every shift (see www.ConsultGeriRN.org for resources for validated instruments).

- Acute onset; evidence of underlying medical condition
- Alertness: fluctuates from stuporous to hypervigilant
- Attention: inattentive, easily distractible, and may have difficulty shifting attention from one focus to another; has difficulty keeping track of what is being said
- Orientation: disoriented to time and place; should not be disoriented to person
- Memory: inability to recall events of hospitalization and current illness; unable to remember instructions; forgetful of names, events, activities, current news, and so forth
- Thinking: disorganized thinking; rambling, irrelevant, incoherent conversation; unclear or illogical flow of ideas; or unpredictable switching from topic to topic; difficulty in expressing needs and concerns; speech may be garbled
- Perception: perceptual disturbances such as illusions and visual or auditory hallucinations and misperceptions such as calling a stranger by a relative's name
- Psychomotor activity: may fluctuate between hypoactive, hyperactive, and mixed subtypes

Nursing Care Strategies

Based on protocols in multicomponent delirium prevention studies (Inouye et al., 1999 [Level II]; Lundström et al., 2007 [Level II]; Marcantonio et al., 2001 [Level II])

- Obtain geriatric consultation.
- Eliminate or minimize risk factors.
    - Administer medications judiciously; avoid high-risk medications (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Reducing adverse drug events in older adults).
    - Prevent/promptly and appropriately treat infections.
    - Prevent/promptly treat dehydration and electrolyte disturbances.
    - Provide adequate pain control (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Pain management in older adults).
    - Maximize oxygen delivery (supplemental oxygen, blood, and blood pressure support as needed).
    - Use sensory aids as appropriate.
    - Regulate bowel/bladder function.
    - Provide adequate nutrition (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Nutrition in Aging).
- Provide a therapeutic environment.
    - Foster orientation: frequently reassure and reorient patient (unless patient becomes agitated); use easily visible calendars, clocks, caregiver identification; carefully explain all activities; communicate clearly.
    - Provide appropriate sensory stimulation: quiet room, adequate light, one task at a time, noise reduction strategies.
    - Facilitate sleep: back massage, warm milk or herbal tea at bedtime, relaxation music/tapes, noise reduction measures, avoid awakening patient.
    - Foster familiarity: encourage family/friends to stay at bedside, bring familiar objects from home, maintain consistency of caregivers, minimize relocations.
    - Maximize mobility: avoid restraints (see NGC summary of the Hartford Institute for Geriatric Nursing guideline Physical restraints and side rails in acute and critical care settings) and urinary catheters, ambulate or active range of motion (ROM) three times daily.
    - Communicate clearly, provide explanations.
    - Reassure and educate family (see the NGC summary of the Hartford Institute for Geriatric Nursing guideline Family caregiving).
    - Minimize invasive interventions.
    - Consider psychotropic medication as a last resort for agitation.

Follow-up Monitoring of Condition

- Decreased delirium to become a measure of quality care
- Incidence of delirium to decrease
- Patient's days with delirium to decrease
- Staff competence in recognition and treatment of acute confusion/delirium

- Documentation of a variety of interventions for acute confusion/delirium

Definitions:

Levels of Evidence

Level I: Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

Level II: Single experimental study (randomized controlled trials [RCTs])

Level III: Quasi-experimental studies

Level IV: Non-experimental studies

Level V: Care report/program evaluation/narrative literature reviews

Level VI: Opinions of respected authorities/consensus panels

AGREE Next Steps Consortium (2009). Appraisal of guidelines for research & evaluation II. Retrieved from http://www.agreetrust.org/?o=1397 .

Adapted from: Melnyck, B. M. & Fineout-Overholt, E. (2005). Evidence-based practice in nursing & health care: A guide to best practice. Philadelphia, PA: Lippincott Williams & Wilkins and Stetler, C.B., Morsi, D., Rucki, S., Broughton, S., Corrigan, B., Fitzgerald, J., et al. (1998). Utilization-focused integrative reviews in a nursing service. Applied Nursing Research, 11(4) 195-206.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Delirium

Guideline Category

Evaluation

Management

Prevention

Risk Assessment

Treatment

Clinical Specialty

Critical Care

Family Practice

Geriatrics

Nursing

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Health Care Providers

Hospitals

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide a standard of practice protocol to reduce the incidence of delirium in hospitalized older adults

Target Population

Hospitalized older adults

Interventions and Practices Considered

Assessment/Evaluation

1. Assessment for risk factors for delirium
2. Assessment of features of delirium

Management/Treatment

1. Obtaining geriatric consultation
2. Elimination or minimization of risk factors
3. Provision of therapeutic environment

Major Outcomes Considered

- Presence or absence of delirium
- Cognitive status
- Functional status
- Destination at discharge
- Patient, family, and caregiver satisfaction with care
- Morbidity and mortality
- Length of stay

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Although the Appraisal of Guidelines for Research and Evaluation (AGREE) instrument (described in Chapter 1 of the original guideline document, *Evidence-based Geriatric Nursing Protocols for Best Practice*, 4th ed.) was created to critically appraise clinical practice guidelines, the process and criteria can also be applied to the development and evaluation of clinical practice protocols. Thus, the AGREE instrument has been expanded (i.e., AGREE II) for that purpose to standardize the creation and revision of the geriatric nursing practice guidelines.

The Search for Evidence Process

Locating the best evidence in the published research is dependent on framing a focused, searchable clinical question. The PICO format—an acronym for population, intervention (or occurrence or risk factor), comparison (or control), and outcome—can frame an effective literature search. The editors enlisted the assistance of the New York University Health Sciences librarian to ensure a standardized and efficient approach to collecting evidence on clinical topics. A literature search was conducted to find the best available evidence for each clinical question addressed. The results were rated for level of evidence and sent to the respective chapter author(s) to provide possible substantiation for the nursing practice protocol being developed.

In addition to rating each literature citation as to its level of evidence, each citation was given a general classification, coded as "Risks," "Assessment," "Prevention," "Management," "Evaluation/Follow-up," or "Comprehensive." The citations were organized in a searchable database for later retrieval and output to chapter authors. All authors had to review the evidence and decide on its quality and relevance for inclusion in their chapter or protocol. They had the option, of course, to reject or not use the evidence provided as a result of the search or to dispute the applied level of evidence.

Developing a Search Strategy

Development of a search strategy to capture best evidence begins with database selection and translation of search terms into the controlled vocabulary of the database, if possible. In descending order of importance, the three major databases for finding the best primary evidence for most clinical nursing questions are the Cochrane Database of Systematic Reviews, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Medline or PubMed. In addition, the PsycINFO database was used to ensure capture of relevant evidence in the psychology and behavioral sciences literature for many of the topics. Synthesis sources such as UpToDate® and British Medical Journal (BMJ) Clinical Evidence and abstract journals such as *Evidence Based Nursing* supplemented the initial searches. Searching of other specialty databases may have to be warranted depending on the clinical question.

It bears noting that the database architecture can be exploited to limit the search to articles tagged with the publication type "meta-analysis" in Medline or "systematic review" in CINAHL. Filtering by standard age groups such as "65 and over" is another standard categorical limit for narrowing for relevance. A literature search retrieves the initial citations that begin to provide evidence. Appraisal of the initial literature retrieved may lead the searcher to other cited articles, triggering new ideas for expanding or narrowing the literature search with related descriptors or terms in the article abstract.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Levels of Evidence

Level I: Systematic reviews (integrative/meta-analyses/clinical practice guidelines based on systematic reviews)

Level II: Single experimental study (randomized controlled trials [RCTs])

Level III: Quasi-experimental studies

Level IV: Non-experimental studies

Level V: Care report/program evaluation/narrative literature reviews

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Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Not stated

Evidence Supporting the Recommendations

References Supporting the Recommendations

American Psychiatric Association (APA). Diagnostic and statistical manual of mental disorders DSM-IV-TR. 4th ed. Washington (DC): American Psychiatric Association (APA); 2000.

Inouye SK, Bogardus ST Jr, Charpentier PA, Leo-Summers L, Acampora D, Holford TR, Cooney LM Jr. A multicomponent intervention to prevent delirium in hospitalized older patients. N Engl J Med. 1999 Mar 4;340(9):669-76. PubMed

Inouye SK, van Dyck CH, Alessi CA, Balkin S, Siegal AP, Horwitz RI. Clarifying confusion: the confusion assessment method. A new method for detection of delirium. Ann Intern Med. 1990 Dec 15;113(12):941-8. PubMed

Lundstrom M, Olofsson B, Stenvall M, Karlsson S, Nyberg L, Englund U, Borssen B, Svensson O, Gustafson Y. Postoperative delirium in old patients with femoral neck fracture: a randomized intervention study. Aging Clin Exp Res. 2007 Jun;19(3):178-86. PubMed

Marcantonio ER, Flacker JM, Wright RJ, Resnick NM. Reducing delirium after hip fracture: a randomized trial. J Am Geriatr Soc. 2001 May;49(5):516-22. PubMed

Michaud L, Bula C, Berney A, Camus V, Voellinger R, Stiefel F, Burnand B, Delirium Guidelines Development Group. Delirium: guidelines for general hospitals. J Psychosom Res. 2007 Mar;62(3):371-83. [148 references] PubMed

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for selected recommendations (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Patient

- Absence of delirium or cognitive and functional status returned to baseline
- Discharge to same destination as prehospitalization

Health Care Provider

- Regular use of delirium screening tool
- Increased detection of delirium
- Implementation of appropriate interventions to prevent/treat delirium
- Decreased use of physical restraints and anti-psychotic medications
- Increased satisfaction in care of hospitalized older adults

Institution

- Improved staff education and interprofessional care planning
- Implementation of standardized delirium screening protocol
- Decreased overall cost

- Decreased length of stays
- Decreased morbidity and mortality
- Increased referrals and consultation to above-specified specialists
- Improved satisfaction of patients, families, and nursing staff

Potential Harms

Not stated

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Chart Documentation/Checklists/Forms

Mobile Device Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2003 (revised 2012)

Guideline Developer(s)

Hartford Institute for Geriatric Nursing - Academic Institution

Guideline Developer Comment

The guidelines were developed by a group of nursing experts from across the country as part of the Nurses Improving Care for Health System Elders (NICHE) project, under sponsorship of the Hartford Institute for Geriatric Nursing, New York University, College of Nursing.

Source(s) of Funding

Hartford Institute for Geriatric Nursing

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Not stated

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Guideline Availability

Electronic copies: Available from the Hartford Institute for Geriatric Nursing Web site .

Copies of the book *Evidence-Based Geriatric Nursing Protocols for Best Practice*, 4th edition: Available from Springer Publishing Company, 536 Broadway, New York, NY 10012; Phone: (212) 431-4370; Fax: (212) 941-7842; Web: www.springerpub.com .

Availability of Companion Documents

The following are available:

- *Try This*® - issue 13: The Confusion Assessment Method (CAM). New York (NY): Hartford Institute for Geriatric Nursing; 2 p. 2012. Electronic copies: Available in Portable Document Format (PDF) from the Hartford Institute for Geriatric Nursing Web site .
- *Try This*® - issue 25: The Confusion Assessment Method for the ICU (CAM-ICU). New York (NY): Hartford Institute for Geriatric Nursing; 2 p. 2012. Electronic copies: Available in PDF from the Hartford Institute for Geriatric Nursing Web site .
- *Try This*® - issue D8: Assessing and managing delirium in older adults with dementia. New York (NY): Hartford Institute for Geriatric Nursing; 2 p. 2013. Electronic copies: Available in PDF from the Hartford Institute for Geriatric Nursing Web site .
- *Try This*® - issue D3. Brief evaluation of executive dysfunction: an essential refinement in the assessment of cognitive impairment. New York (NY): Hartford Institute for Geriatric Nursing; 2 p. 2012. Electronic copies: Available in PDF from the Hartford Institute for Geriatric Nursing Web site .
- Delirium: the under-recognized medical emergency. How to Try This video. Available from the Hartford Institute for Geriatric Nursing Web site .
- Brief evaluation of executive dysfunction: an essential refinement in the assessment of cognitive impairment. How to Try This video. Available from the Hartford Institute for Geriatric Nursing Web site .

The ConsultGeriRN app for mobile devices is available from the Hartford Institute for Geriatric Nursing Web site .

Patient Resources

None available

NGC Status

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